



TARGET FOR NEUTRINO BEAMS

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October 19, 1978

Seven BeO (Beryllia or Beryllium Oxide) slugs that are 1" dia. x 1 1/2" long giving a total length of 10 1/2" (26.67 cm) are centered on the \emptyset beam line. The 26.67 cm represents just over one interaction length of BeO. The slugs are contained by loosely slipping them into a 1" dia. hole in a 4" x 4" x 14" long 6061-T6 aluminum block. The hole is located laterally on the center line 1" from the top. The base of the block has two independent water paths machined into it. Only one is used at a time with a flow rate of 1 gpm and is interlocked at 0.75 gpm to shut off beam. The use of BeO was one of evolution during the period of increasing intensity. For backup, the target can be moved laterally and the block itself can provide 14" (35.56 cm) of aluminum to be used at intensity levels below 1.5×10^{13} particles. The 35.56 cm also represents just over one interaction length of aluminum. Figure 1 shows schematically the arrangement of the BeO within the aluminum.

